

Title (en)

Use of the variation of the ratio of Mg:Ti in a catalyst to vary or control the short chain branching distribution of ethylene copolymers

Title (de)

Verwendung der Veränderung des Mg:Ti Verhältnisses in einem Katalysator zur Änderung oder Kontrolle der Verteilung der kurzen Ketten in Ethylencopolymeren

Title (fr)

Utilisation de la variation de la proportion Mg:Ti dans un catalyseur pour réguler ou contrôler la distribution des chaînes courtes dans les copolymères de l'éthylène

Publication

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Application

EP 93908549 A 19930317

Priority

- US 85417592 A 19920320
- US 9302751 W 19930317

Abstract (en)

[origin: US5487938A] A transition metal containing catalyst useful for the polymerization of alpha -olefins is prepared by (A) forming in an inert atmosphere which excludes oxygen and moisture a slurry of (1) a porous inorganic oxide support material selected from the group consisting of silica, alumina, or a combination of silica and alumina, said support material containing not greater than about 5 millimoles of hydroxyl groups per gram of support material and a particle size not greater than about 10 microns and a surface area of from about 50 to about 800 m²/g in an inert organic liquid medium; (B) mixing said slurry with (2) an alkoxide and stirring the resultant mixture at a temperature of from about -20 DEG C. to about 120 DEG C. for a time sufficient to saturate the surface of the support material; (C) mixing the product from (B) with (3) a titanium compound or a combination of a titanium compound and (4) a vanadium compound and stirring the resultant mixture at a temperature of from about -20 DEG C. to about 120 DEG C. for a time sufficient to allow complete reaction of the titanium compound and the vanadium compound with the organomagnesium moieties remaining on the solid support; (D) mixing the product from (C) with an inert organic solution of (5) a Group IIIA metal alkyl halide at a temperature of from about -20 DEG C. to about 120 DEG C. for a time sufficient to complete the reduction of the titanium and vanadium, if present, compounds to their final oxidation state. Ethylene/alpha-olefin copolymers which have greater than 17 percent high density fraction and a Mw/Mn ratio of less than about 3.6 are shown to be useful in making cast films which have good stretchability and good puncture resistance. Copolymers of the present invention having the specified properties are especially useful in making the films.

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C-Set (source: EP US)

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